SOME NEW BOOKS.

The Moors in Spain.

Mr. FRANCIS GRIFFIN STOKES has done a useful and needed work in the translation and annotation of *Spanish Islam, a History of the Moslems in Spain* by REINHART DOZY (Duffield and Company). Up to the appearance of the work of Dozy (1820-1883) in 1861, Conde's Spanish history of the Moors in Spain had been accepted on all hands as authoritative, and practically as final. Dozy, a Hollander, who entered the University of Leyden in 1837, devoted himself to Orientalism, and took for his qualifying thesis a monograph on Arabian costume. This took him far afield, among other places into the Spanish language and into Conde's history, which he found entirely uncritical and untrustworthy. For one thing, the author did not really know Arabic, and according to his critic and supplanter "brought an imagination of extreme fertility to the aid of a knowledge scarcely elementary." In this estimate another Orientalist, no less than Ernest Renan, concurred. A conservative estimate of Conde's work by an English scholar is that it is "a book of considerable literary merit but slight historical value." In the course of a volume on the medieval history of Spain, published in 1849, Dozy made his attack, which could do Conde no personal harm since he had died in 1820 but which destroyed the reputation of his history. This attack was so well sustained that it procured academic honors for the critic even in Spain, where a sensibility about the work of a famous Spanish author might have been supposed to be prejudicial to the acceptance of a hostile criticism written in French by a Dutchman. This and other historical investigations were worth to Dozy the chair of history in Leyden in 1850, and the ensuing eleven years were largely devoted to the history, which in its original French form occupied four volumes, but is in this English version compressed into a single large octavo of some 750 pages, each of the original volumes becoming a "book." It seems strange that more than half a century should have elapsed without a translation of so important a book into English. Doubtless that work would have been done long ago if the author had written it in Dutch instead of French, as many of his countrymen resented his not doing.

Mr. Stokes particularly praises the arrangement of the book which he presents. In that praise few readers will concur. Some sketch of Spain before the Moslems entered it would seem to be a necessary preliminary to the story, as well as some sketch of the Moslems before they entered it. The latter, indeed, we have in the first book, which, however, in the course of the narrative rather assumes their arrival in Spain than describes it. It is only in the second book that the state of Spain before the conquest is adverted to at all. It is probable that there are no trustworthy details of the foundation of the Visigothic kingdom which held sway before the invasion or an author who has ransacked all the Arabian manuscripts so diligently would have found them. All that he tells or rather shows us about the Visigothic kingdom is that it was "structurally weak." In no other way can we account for the ludicrous ease with which the Moorish conquest was accomplished. The weakness is commonly attributed by historical inquirers to the fact that the Visigoths had remained foreigners. They had taken no root in the soil nor any real hold of the people. It is curious to consider how Spain up to the sixteenth century had been immemorially subject to one or another foreign yoke. The Roman had been the easiest of these, and the Roman occupation the most fruitful. It is significant how the metropolis attracted the talent of the province and added their achievements to its own glories; how such Latin classics, for example, as Seneca and Martial should have been by birth Cordovans. Nothing of the kind occurred under the Visigoths. There was no more development of political institutions than of arts, nothing that has left relics to denote a development of any kind.

The Visigothic rulers seem to have been simply waiting till a stronger than they should come. That had been the condition of the remains of the Roman power when the Visigoths arrived. There were a few enormous estates (the latifundia), and a population of serfs and slaves, two distinct classes of which the conditions of servitude were different, but with nothing in either which could stimulate patriotism or make the victims of it willing to fight to keep it going. And what the Visigoths found in this respect they seem to have left. There was an obvious way to divert popular discontent. The author quotes from Michelet: "Whenever, during the Middle Ages, men began to ask why it was that the ideal paradise of a world under the sway of the church was realized here below as a hell, the church, conscious of the objection, hastened to stifle it by declaring: 'It is the wrath of God! It is due to the crime of the Jews! The murderers of our Lord are still unpunished!' And a persecution of the Jews was set on foot." In the persecutions of 616 it is related that 90,000 Jews were terrorized into baptism. In 694 a plot of the Jews to invite an invasion from Africa was discovered and all the Jews were enslaved. Slaves and serfs were alike opposed to the powers that were and yet slaves and serfs were all upon which that power had to rely. There were more slaves than freemen in the army, which is to say that a majority of the army wished well to the enemy, whoever he was. So that when the invading Moslem army landed, only seventeen years after the enslavement of the Jews, it found the majority of the defenders in a hospitable mood.

The Arabian Governor of Africa had sent across the Straits in 710 a raiding party of four hundred Berbers with a hundred horses, which had plundered the neighborhood of Algeciras and returned without molestation. Encouraged by this success, he sent over the next year a force of 7,000, which landed at Gibraltar, took the town at the base of the rock, and, on the approach of the Visigothic King Roderic, instead of reembarking, sent back for reenforcements. These were forwarded to the number of 5,000. The Visigothic nobles to whom the King had appealed had their own grievances against him. Moreover, they believed, or affected to believe, that the invaders were mere raiders, who would withdraw, as they had done before, as soon as they had exhausted the booty in the neighborhood of the landing place. Although they did not wish to see the country conquered, they did wish to see the King discomfited, and, when the battle was imminent, ordered their men not to join in it. As a result, in the battle of July 9, 711, the invaders defeated the small force which really fought them, the King was killed or disappeared, and the leader of the Berbers, encouraged by his easy success, continued to advance. Town after town fell without resistance. Cordova was delivered up by treachery. At Toledo the Jews betrayed the Christians. The raid, as it was in the original intention, had become a conquest. It was nearly a year before more Moslems came over from Africa, when 18,000 came under the command of the Governor in person. Seville and Merida alone gave them the trouble of standing a siege. In a wonderfully short time the conquest became more complete than it could have become in a generation if the mass of the inhabitants had believed they had anything to lose by a change of masters.

The historian thinks they were in fact better off than before. The confiscated land had been divided from great estates into small holdings, to one of which any tiller of the soil might aspire, so that what was in effect a system of peasant proprietorship came about. Moreover, slavery itself was much milder under Mohammedan than under Christian law, and freedom within the reach of everybody who would declare that there was no God but God and that Mohammed was his prophet. Then he became "Allah's freedman." But, having once apostatized from Christianity to Mohammedanism, he must take good care not to apostatize back again. That was never forgiven. And indeed the state of the renegades was not enviable at the best. They were despised by the Christians and distrusted by the Arabs. All the same, though the yoke of the stranger presently became much heavier than it had been at first, when the conquerors, in their own interest, were taking pains to conciliate the conquered, there was never a religious war, properly so called. The lukewarmness of the invaders in the matter of religion is one of the most surprising disclosures of these pages. An outward conformity was all that was required, and the penalties for refusing that were not very grievous. Christians were taxed as such. But at the very worst of the Moslem rule religious persecution never become so fierce and ruthless in Spain as it did after their expulsion, when the Holy Inquisition was in full force and effect. It is true that the Church as a corporate body was not so well off as the individual Christian. That was an institution with profitable opportunities which the conquerors took over to themselves. The ecclesiastical rights of the Christian kings passed to the Arabian Sultans: They sold bishoprics to the highest bidder, and it was the same to them if the highest bidder was a Jew or a Moslem. He had means of reimbursing himself out of his Christian flock.

The first serious conflict occurred nearly a century after the conquest. The conquerors as they became more secure in their hold of the country became less observant of the treaties by which they had secured the submission of the more formidable communities. Under the Visigoths there appears to have been nothing that could be called a nationality. Each city made war and peace on its own account. One of the earliest of the risings against the Moslem power was that at Toledo. It was hardly even a rising, so soon and so terribly was it put down in the memorable massacre of "The Day of the Fosse." The whole affair was the result of fanaticism, but it was not a fanaticism of Moslem against Christian, but of Moslem against Moslem, of Moslem Puritans, so to say, against Moslem Cavaliers. Abd-er-Rahman, first of the name, had ruled without dispute, though his rule had not been pleasing to the Fakihs, or "theologians," as the word is here translated, the Moslems of the straitest sect. His successor was an ascetic and a devotee, who had encouraged the Fakihs by precept and by example, and had sent theological students to their chief in Medina. This chief was Malik, the founder of one of the four orthodox sects of Islam. Of one of these pupils a characteristically Oriental tale is told. While Malik was lecturing, an elephant passed the seminary and the class of divinity students rushed out to see him, all but the Berber sent by the Sultan of Spain. "Why do you not go with the rest," inquired the professor; "there are no elephants in Spain?" "I left my country to see you and to profit by your teachings, not to look at elephants," was the answer, which, of course, greatly endeared the pupil to his revered preceptor. But the son of the royal theologian and devotee was by no means of the paternal mind. While he rather liked theology, in moderation, he was of a gay and sociable turn of mind, fond of field sports and disregardful of the Koran's prohibition of wine.

The Fakihs entirely withdrew from Hakam the confidence they had had in his father, and came fiercely to resent his rule. They prayed publicly for his conversion, a liberty to which no sovereign can be expected tamely to submit. They even assembled a mob to stone him in the streets of Cordova, insomuch that he and his guard had to draw their swords and cut their way through. Thereupon the theologians plotted to supplant the Sultan with his cousin. The plot was betrayed. Some of the conspirators learned of the betrayal in time to make their escape, but seventy-two of them fell into the Sultan's hands and were promptly crucified. One of the refugees made his way to Toledo, where he resumed plotting. The seed fell upon good ground, the Toledans having already their special grievances. The Sultan, now thoroughly embittered, set a trap for the conspirators. His governor of Toledo had lately induced the citizens to build him a castle to repel invaders. The Sultan sent his son to the governor on a visit and the leading Toledans were invited to meet him at the castle. The guests as they arrived were admitted only one by one at the main gate, while their horses were taken to the postern to await their exit. But in the court yard of the castle there was a trench, the "fosse" of the title, to which each guest was led, and when he reached it, beheaded and buried. The arrangements had been so well made that nobody took alarm until it was too late. The victims were estimated by contemporary chroniclers from 700 to 5,000. But the theologians and the "renegades" of Cordova were kept quiet for seven years.

The story is characteristic of Moorish rule in Spain, and typical of many others that are told there. Machiavellian principles of government were never better understood or more skilfully applied in the sixteenth century by the Christian rulers of Italy than they had been in the ninth by the Mohammedan rulers of Spain. Massacre alternates with assassination, by the knife, by strangulation, by poison, as a political device which nobody except the intended victims seems to have made a ground of reproach against those who employed it. And the Moslem domination found victims who could suffer as heroically as rulers and conspirators could act fiendishly. The annals of Christian martyrdom have no more affecting story than that of Flora of Cordova, the child of a mixed marriage, who had always passed as a Mohammedan and who would have been quite safe in retirement had she not courted and invited martyrdom by bearing witness to her faith. The Moslem judge before whom she was arraigned tried his best to induce her to buy her life merely with silence. Her teacher, Eulogius, was of as stern stuff; one of his judges accused him of conspiring against his own life.

The Moslem rule in Spain anticipated the time of the Renaissance in Italy not only in its political cruelty and perfidy but in its efflorescence of letters and art. The mosque of Cordova, begun in the eighth century, was completed as the traveller now sees it in the tenth, when there was no other recent construction in any other part of Europe that would bear artistic comparison with it, and the masterpiece of Saracenic decoration, the fortified palace of the Alhambra, the latest of the noteworthy works of the Moors in Spain, is coeval with the cathedrals of the Ile de France. The appreciation of Arabic poetry has never extended to the Aryan mind, although it was a complaint among the Christians of Spain in the ninth century that Arabic literature was superseding Latin, and that for one Christian who could write the latter intelligibly there were many who could write the former even with elegance. To be sure, Cardinal Ximenes took the revenge of Christendom seven centuries later, when as chief of the Inquisition he ordered 80,000 volumes to be destroyed at Granada and anathematized the Arabic in which they were written as "the rude language of an heretical and despised race." Hakam, who in the tenth century succeeded Abd-er-Rahman III., the greatest of the Moorish rulers, was a scholar and the great encourager of learning in his time. It was under him that the University of Cordova took its highest rank, and he encouraged foreign scholars to settle in Spain. The Moorish chroniclers assert that his own library numbered 400,000 volumes, of which he had read all and annotated most. The mere perusal, it seems, would have been a respectable life work for Methuselah. The priority of the Moors in the higher mathematics is still attested by the use of the Arabic word algebra. The Moorish conquest of Spain remains one of the most wonderful of historical phenomena, and an authentic recital of it from the original documents a valuable possession, which this volume makes for the first time accessible to English readers.

The Anticipated Centennial of Peace.

The presumption implicit in the title of HENRY CABOT LODGE'S *One Hundred Years of Peace* (Macmillans) is not disturbingly bold, even though the one hundredth anniversary of the Treaty of Ghent is a Christmas and a quarter ahead of us; if John Bull is getting old enough to be a little querulous without great reproach, or mellow, as his temperament may be and the nature of the provocation prescribe, Brother Jonathan too has been moving with the fugacious years and has exchanged the Yankeedoodleism of his exuberant youth for something of the outward calm and dignity of complacent middle age. Yet, let the thrifty instinct of authorship and the restless Americanism that puts afternoon editions on the street at 10 A. M. and circulates Saturday magazines in midweek and monthlies on the advance 15th seek its market with whatever it may of commercial prepositiveness, more amusing than reprehensible, it is permissible to speculate, quite in the subjunctive mood, on the almost metaphysical possibilities of those fifteen months discounted so carelessly or with such confidence of calculation. So many things might happen before Christmas of 1914! To go no further into the inviting field of severely conditional prophecy, our cis-Atlantic governing agencies might refuse to Mrs. Pankhurst the privilege of translating her system of refined incendiarism and sweetly feminized anarchy to our land of the new but not boundless freedom—and England, jealous for her devoted daughters, might immediately enter upon a course of reprisal backed by her beetling dreadnoughts and superdreadnoughts and plupreter-superdreadnoughts: whereupon the "century of peace" would be swiftly and effectually "knocked into a cocked hat." But this is borrowing trouble for the Dove.

The Senator, whose catalogue of earned distinctions in scholarship and affairs exhibits in exalted ranking a careful and correct study of American history as well as institutions, avows very early in his book—which has rather the air and force of an address from the platform than the scope and detail of a deliberately worked up volume and gains thereby in the effectiveness of its sharp outline review of a near-century's experience—that the period of peace with which his treatise concerns itself is more accurately described in negative than in positive terms, as a period free from armed conflict. The cold fact is that "there have been some perilous moments when war has seemed very imminent." Fortunately it has happened that when the rulers of the two lands have been at loggerheads the feelings of "the silent masses" have been friendly enough to check hotheads in authority; and when the popular passions have been aroused there has been no official casus belli. Recognizing clearly the force of this consideration and seeing plainly "how, by slow steps, with many interruptions and much bitterness on both sides, we have finally attained to the genuine friendship in which all sensible men of both countries rejoice to-day," Senator Lodge seems to let the noble impulse of friendliness dull slightly the logic of facts. When the germinal articles from which the book grew were written there was tense dissatisfaction in England concerning Washington's attitude toward the matter of Panama Canal tolls; and when those articles were "revised, corrected and much enlarged" it must have become apparent that the hostile sentiment rested upon no frail fulcrum of whim or quibble but upon the mutually fair interpretation and application of the terms of an international understanding of undisputable record and authority. Not to magnify mole hills, and relegating the English abstention from participation in the San Francisco exposition to the limbo of interests of less than war spouting potentiality, a symptom not the disease, there is still enough latent chemical force in the toll debate to cause a pretty disastrous explosion under reckless handling. Let not the suspicion of chauvinism attach to this suggestion; here again those "silent masses" are all for peace, and Parliament and Congress are trusted to contrive a satisfactory solution and settlement. The sole intended implication is that not yet are interruptions and bitterness wholly unexpectable. No counsels of false security are to be expected from the Senator. Good relations exist, and he and we hope they will always continue; but the ironical fate of nations knows no more exasperating challenge than that of hollow praters of peace eager to accelerate the millennium's approach.

Fishing rights, boundaries and commercial relations have kept statesmen awake through anxious nights. American publishers have played ducks and drakes with copyright, and Mrs. Trollope and Dickens paid back the debt of complimentary exchange in generous measure. Southey and Sydney Smith filled the English reviews with slander of the American people that wise Coleridge gently rebuked and Emerson stoutly refuted, but Thackeray, Irving's friend, was kinder, and the admirable Mr. Bryce continued that fashion. The Webster-Ashburton treaty settled "questions so inflamed by extraneous and accidental circumstances as to have brought the two countries to the verge of war." Perhaps if President Polk had not been a Democrat the Senator would have honored him with a little less adjectival irony; but there was a good deal of bluffing on both sides over "Fifty-four Forty or Fight" that might well have led to resort to the harsh arbitrament of gunpowder. Hinting, not sadly, of what might have been, the Senator suggests that the backdown on Fifty-four Forty cost us the control of the Pacific, and points out that we might have conquered Canada after the civil war. The Trent and Alabama affairs, and Cleveland's vigorous assertion of the Monroe Doctrine in the "Venezuela incident" of 1895 carried the seeds of war. And yet through all the revolving decades there was no war.

To President Cleveland Senator Lodge gives praise for "a very great public service," the conviction of the Powers of Europe with a new and effective appreciation of the Doctrine. He cites the Chichester incident at Manila Bay as "representative of the attitude of the British Government"; "The sympathies of Europe were with Spain, but England stood with the United States."

The great clearing up of Anglo-American relations fifteen years ago wins hearty praise for the statesmen of that time:

> The policy might as well have been adopted in 1798 as in 1898. * * * Mr. Balfour and Lord Lansdowne put into effect their belief that the true policy for England was to be friends with the United States. * * * They are entitled to a place in the memory of Americans with Burke and Fox and Chatham, with Cobden and with Bright, who did not forget the common * * * aspirations for freedom in the days when the Americans were a little people struggling to exist, or in those darker days when the Government of the United States was trying to preserve the unity of the great nation which Washington had founded and which Lincoln was destined to save.

Senator Lodge's swift review of the history of ninety-eight years of peace will not hurt the pride of patriotic Americans and ought not to offend the amour propre of English readers. It should awaken on both sides of the Atlantic an earnest resolve for the rounding out of the warless century; a resolve not negligent of abhorrent possibilities and infinitely more to be desired than limitless floods of mawkish sentiment.

The Father of Steam Navigation.

It is decidedly unusual for American readers to get from an English author impetus for a favorable revision of the established reputation of one of their own great men; but such an experience is in store for readers of *Robert Fulton, Engineer and Artist, His Life and Works*, by H. W. DICKINSON, associate member of the English Institute of Mechanical Engineers and a member of the staff of the Science Museum at South Kensington (John Lane Company). Not that Fulton has suffered obloquy or even neglect at the hands of his compatriots; far from it. The joining of his name with that of Henry Hudson in the memorable celebration four years ago and the festal voyage up the river of a replica of the old Clermont would alone have insured the great inventor of a belated recognition had he never been hailed or of a revival and new accession of fame had his reputation merely suffered a temporary lapse; and Fulton's name and principal achievements get a paragraph or two in every school book of American history. The Manhattan street that bears his name was so christened at its opening in 1816 as a thoroughfare between the two ferries, over the North and East rivers, in honor of him who had built the first steamboats for each, supplanting ferryboats propelled by sail and oar; and there are not lacking in the city, both on the hither and the further side of the East River, other memorials. It will be a pity if, as the English author sorrowfully anticipated, the then projected commemorative watergate is to have none but a paper existence: "The money subscribed has been spent on preliminary studies, and public interest has waned."

Robert Fulton is not forgotten; but American estimates of his work have been inaccurate, either patriotically exaggerated or loosely composed, and at the hands of foreign critics he has suffered equally unfair detraction in favor of their own countrymen. It is of commonplace observation that great theories and inventions are often achieved almost simultaneously by minds in only the most tenuous, if any, communication, and in and before Fulton's time many engineers were working on the problems, principally of canal construction and operation and of steam and submarine navigation, that occupied Fulton's highly original genius and chained his eager and sustained attention. Mr. Dickinson's professed and nicely executed intention is to fix "without bias and without petty national feeling" the facts of Fulton's career; and the story he tells is delightfully free from bias of any sort. He avoids even the temptation to stand so straight as to "lean backward"; he is fair to both sides of the Atlantic. Indeed, as he says, Fulton was pretty much the cosmopolite: "Born a British subject in a British colony, the seed time of his life was spent in England, the fruition took place in France, the harvest was reaped in his native America." The centenary of the introduction of steam navigation on a commercial basis occurred in this country six years ago (though its celebration was postponed to blend with the observation of the Hudson tercentenary), while in England it fell only last year. Fulton's fame as a pioneer does not rest upon the time or subject matter of his studies, but upon the date of the practical realization in a business sense of his long cherished dream.

It was in the very year of Fulton's birth, 1765, that Watts patented his separate condenser, and in 1782 he perfected his engine to the point where it may fairly be said to have become the basis of the modern machine. Cartwright invented his power loom in 1785. In the next two years two Americans, John Fitch and Oliver Evans, ran respectively a steamboat and a steam road wagon. A steam coach was patented in England in 1801; Symington ran his steam propelled Charlotte Dundas on the Clyde in 1802; the Englishman Richard Trevithick ran a steam locomotive on rails in 1804; Joan Stevens, American engineer, invented a twin screw propeller for steamboats in the same year, and not until 1807 was Fulton's engine, "Fulton's Folly," they called it, to set the echoes of the Hudson highlands reverberating to the sharp exhaust of the steam engine. It was the length and speed of the trip, against wind and tide—"the voyage has been performed wholly by the power of the engine," wrote Fulton himself to his old friend Joel Barlow—and the carriage of passengers that made an era rounding event of the voyage. The famous round trip to Albany began August 17; the boat ran pretty regularly throughout the summer and early fall, and by October a New York newspaper was urging the use of the steamboat for carriage of mails. On October 1 the Clermont came from Albany in twenty-eight hours, carrying sixty passengers; the next morning she left New York with ninety passengers aboard. With typical American quality the tremendous innovation was accepted with such a combination of complete recognition and cool matter of factness that contemporary records are surprisingly scant. New York had a population of 83,000, with a score of newspapers, half of them dailies, yet "excepting the letters written by Fulton and some of the passengers, there is only the barest mention of the steamboat outside the advertisement columns."

A marked trait of Fulton's character is revealed in his letter of instruction to Capt. Brink of the Clermont:

> Sir—Inclosed is the number of voyages which it is intended the Boat should run this season. You may have them published in the Albany papers.
>
> As she is strongly man'd and every one except Jackson under your command, you must insist on each one doing his duty, or turn him on shore and put another in his place. Everything must be kept in order, everything in its place, and all parts of the Boat scoured and clean. It is not sufficient to tell men to do a thing, but stand over them and make them do it. One pair of Quick and good eyes is worth six pair of hands in a commander. If the Boat is dirty and out of order the fault shall be yours. Let no man be Idle when there is the least thing to do, and make them move quick.
>
> Run no risques of any kind when you meet or overtake vessels beating or crossing your way. Always run under their stern if there be the least doubt that you cannot clear their heads by fifty yards or more. Give in the account of Receipts and expenses every week to the Chancellor.
>
> Your most obedient,
> ROBT. FULTON.

The record of Fulton's connection with the problem of moving vessels by means of steam power begins in 1793 with a letter to the Earl of Stanhope, himself a mechanical inventive genius of no mean order, in which the American describes his experiments, begun in June of that year, and invites his Lordship's candid criticism. His Lordship gave it, with all the candor that could have been desired. The first experiment had been with a stern paddle intended to be turned by a winding bow, "to imitate the tail of a salmon"; there was plenty of force, but the return of the paddle prevented continuity of progress. The second device involved the use of side paddle wheels, "no longer in the water than they are doing execution." There were speculations as to action of the paddles and the least resistant shape of hull. Lord Stanhope politely pointed out that the young inventor was far behind the times; his ideas were elementary. The Earl himself was experimenting assiduously with a "duck foot" propeller. The interesting thing about Fulton's progress in the problems of steam navigation is that he worked his way independently, traversing old ground without nosing his pioneer predecessors' trail. His mind was amazingly fertile in devising mechanical expedients, and he had a happy knack of going straight to the key knot of the tangle, with a gift of stating technical problems in lucid everyday language. Perhaps it was an advantage to work in advance of the development of the modern engineering lingo. The very idea of using Watt's lately patented engine in a boat was an original departure from the then conventional lines of experiment in marine power, and Fulton displayed great acumen in his grasp not only of the difficulties of application of the energy but in his quick advance upon the fundamental requirement of getting the most power with the least weight of machinery; a forerunner of the problem that bothered the first "birdmen."

Fulton visited Symington and saw his steamboat in operation, but Mr. Dickinson resents the attempts of "detractors who have declared that Fulton borrowed from Symington all his ideas, even down to the stroke and diameter of his cylinder." The difference in their plans was fundamental, he says; and he finds in the direct comparison which he invites and makes not contradiction but confirmation of his contention that Fulton's achievement had "independent origin." Symington's engine was horizontal, with a cylinder of twenty-two inches diameter and four foot stroke, while Fulton had a vertical beam engine with the same stroke but twenty-four inches in diameter; and while Symington's engine acted direct on a paddle wheel set in a recess in the stern of the craft Fulton's was connected by gearing through a flywheel to drive paddle wheels at the sides of the boat. Symington's was the better arrangement, but recognition of the superiority of direct action was postponed half a century. The difference between the British and American engineers lay in the use they made of their inventions: Symington's "had no permanent abiding result," while Fulton's were carried on to commercial usefulness.

Less known but perhaps even more romantic were Fulton's experiences in the capacity of promoter, the long negotiations with the Governments of France and England, the series of patents and the inventor's hardihood in exploiting by personal demonstrations the qualities of his submarine craft and his torpedoes. No game was too high for him to fly at; he wrote, with naive earnestness and considerable persuasive eloquence, to Washington and Bonaparte, and in his correspondence with Government officers he shows a right shrewd understanding of the principle of effective "approach." He was earnest, enthusiastic, optimistic and confident almost to "cheek." Always while working abroad he had America at the back of his head. His activities in canal construction and operation, excavation, motive power and inclined planes, activities of which Mr. Dickinson makes a real story, were conducted by force of circumstances in terms of English needs and practices, but always with the idea of ultimate commercial application in the homeland. He saw "a short Cut from New York to Philadelphia to Baltimore, which will prevent about 500 miles of a coasting voyage," and a canal from Philadelphia to Lake Erie. The coastal inland waterways of to-day and the Erie Canal in this State are creatures of Fulton's dream made real.

The range of his mechanical interests was remarkable. In addition to the canal and steamboat work on which he concentrated he invented a machine for sawing marble blocks, a digging machine, a draw or "weigh" bridge, a canal plane system, submarine boat and torpedo, a machine for making rope to supersede the slow process of manufacture by hand, and devised a scheme to regulate the area of windmill sails, by means of the wind itself, so as to suit the varying force of the gale. The paddle wheel is the symbol of his life; he used it in a windmill to furnish propulsive power for a canal boat, he used it in his digging machine to force to one side the earth excavated by a series of scoops, and he used it triumphantly on his steamboat. He evolved "the first crude idea of the tanks now extensively used for predicting, from the behavior of scale models under varying conditions, the performances of the actual vessels to be constructed from them," using an artificial pond sixty-six feet long, nine or ten feet wide and two or three feet deep.

And the man who engaged in these distinguished mechanical activities had begun life as a painter. That part of his life story is pretty hazily embodied in the common knowledge of Robert Fulton. He went to Philadelphia in 1782, at the age of 17; and three years later—the record of the interim is scant and unauthenticated—he was established as a miniature painter, a profession which he pursued with real success. Perhaps it was the example of the two Benjamins, Franklin and West, that led him in the winter of 1786-87 to England, where he studied, it is almost certain, under West's direct supervision. His artist life was too uneventful to leave any adequate record of his activities. He was "hung" in the Royal Academy in 1791, two pictures, each the "portrait of a young gentleman," and had that year four paintings in the exhibition of the Royal Society of British Artists. A portrait of Lord Courtenay so pleased the noble sitter that he introduced the artist to persons whose commissions were decidedly welcome to the young man, who had begun life in England with forty guineas. Charles Henry Hart of Philadelphia in a letter to the author said:

> Apart from a curious flatness that he gave his miniatures, which can be recognized even in the reproductions, they are remarkably good for so young a man with so little instruction. They are well drawn, good in design, delicately colored, as miniatures should be, and well executed technically.

The work itself is said to suggest, and circumstances are not in denial of the possibility, some instruction from Peale, the famous American portrait painter. Of Fulton's larger paintings the critic quoted above says:

> Fulton's work showed strong characterization and breadth, a firm brush and good color sense. He had not yet developed a style of his own, and while he gave some promise, it is doubtful whether he would ever have equalled Benjamin West; decidedly he would not have attained to the stature of John Singleton Copley, Gilbert Stuart and John Trumbull, to mention only those who were his contemporaries and compatriots.

Fulton's combination of the imaginative and constructive faculties, the artist and the engineer, suggests a parallel with Samuel F. B. Morse in this country and James Nasmyth, inventor of the steam hammer, not himself a painter but the son and brother of eminent artists; a family exemplification of the close relation possible between the two strains. Whether Fulton's abandonment of art as a means to a living was due to sheer preponderance of the engineering instinct, to recognition of his limitations on the artistic side or to the force of adventitious circumstances is not clearly known; but he made the break sharply. His artistic training was of great usefulness to him in the drawing of designs to accompany applications for patents; they and a number of Fulton's paintings are reproduced in great number and excellent style in Mr. Dickinson's book.

Mr. Dickinson has performed a useful task with distinction, striking a nice balance between the usual human element and the special scientific element of his subject's career. In workmanlike fashion he presents a portrait fair and true to the life of Robert Fulton as a man, as an artist and as an inventor. Appendices contain a wealth of data supplementary to the narrative.

Mr. Roosevelt's Essays.

The collection of *History as Literature and Other Essays*, by THEODORE ROOSEVELT (Scribners), was decidedly worth making. It includes all the author's literary work since his return from Africa which he thinks worth collecting and preserving, politics and travel excepted. What gives it its chief value, dignity and interest is the four addresses which occupy the first half of it. These include "History as Literature," the address delivered before the American Historical Association by its president; "Biological Analogies in History," the Romanes lecture for 1910 delivered at Oxford; "The World Movement," delivered at the University of Berlin, and "Citizenship in a Republic," delivered at the Sorbonne. None of these has the characteristics of an improvisation. All are carefully planned and written.

"History as Literature" many readers will hail as a word in season and a word fitly spoken. It has particular uses for the members of the association before which it was delivered. There is a tendency, perhaps made in Germany and pretty clearly imported thence, among the modern teachers and the modern writers of history to maintain that history being science cannot be literature; that history and literature have nothing to do with each other. So far has this gone that a teacher of history in an American university was expressly instructed on taking up his work that he was to pay no attention whatever in giving his marks to the manner of presentation of the results of the investigations of his students, that their "English," from spelling upward, had nothing to do with the case. It is impossible to imagine such instructions being given in an English university. Perhaps that is the reason why a new book on an historical subject by an Englishman is so much surer of being interesting than a "monograph of some importance" by an American.

In the former case the casual reader infers, with Sam Johnson about the work of Sir Jonas Hanway, that, whether or not it was written to be printed, it was at least printed to be read. With the modern American monograph, non sequitur. It was printed to be put on library shelves and notified on card catalogues to the express and exclusive attention of other monographic mandarins. Mr. Roosevelt has encountered this baleful tendency, just as Mr. Bryce has encountered it, and has equally been moved to assail it as the late British Ambassador was moved in one of his recently collected American addresses. Mr. Roosevelt's treatment of the subject is much more elaborate and is extremely interesting. It ought to have effected some conversions among the historical mandarins, though perhaps it is still too early to seek for evidence of a new faith in their new works. Moreover, an historical mandarin cannot by taking thought increase his stature to that of an historical genius, though he can be and ought to be moved to take a juster view of his own place in the scale of creation and to look upon himself as, in Fichte's phrase, a "hodman," instead of endeavoring to despise the superior who knows how to make use of the hodman's material. The present lecturer puts the case clearly and strongly, and at the same time with circumspection. "I pay high honor to the patient and truthful investigator. He does an indispensable work. My claim is merely that such work should not exclude the work of the great master who can use the materials gathered, who has the gift of vision, the quality of the seer, the power himself to see what has happened and to make what he has seen clear to the vision of others. My only protest is against those who believe that the extension of the activities of the most competent mason and most energetic contractor will supply the lack of great architects."

The "biological analogies" which form the subject of the Romanes lecture at Oxford form one of a class of topics which, since the modern advance and the modern popularization of physical science, have become irresistibly alluring to many men of speculative minds. Perhaps Walter Bagehot's "Physics and Politics," published a generation and a half ago, was the pioneer of such studies in English. What analogy is there between the individual organism of the evolution of which we are coming to know so much more than was ever known before and of the species and genera which it comes to constitute, and the social and political organisms which the human species, working out also the behests of nature, has evolved for itself? How are nations and institutions evolved and how do they advance, retrograde, take the lead and become extinct, even as species and genera do? Or is it with man made organizations as with organisms evolved by nature directly and without the intervention of man? When only the works of man were in question, as exhibited in history, it was already doubtful to many, so wide is the difference in circumstances between any two historical cases, whether the "lessons of history" were of practical value or applicability. When the variety is so increased by the bringing in of organisms not of human origin as to produce mere bewilderment, it is still more temerarious to attempt the drawing of "uses" or "morals" from procedures which may all the same afford matter for specious and attractive illustration. Here also Mr. Roosevelt exhibits circumspection. He is reasonably careful not to press his analogies further than they will fairly go. As illustrations they are often striking, and of the whole discussion to which his subject gives rise it is to be said that it is unfailingly interesting. It is the kind of discussion to which American public men are much less given and in which they are commonly much less competent than those of Great Britain, for example. One is patriotically gratified to find an American politician holding his own so well in so unfamiliar an arena.

The four addresses are the gist of the book. It is filled out to the dimensions of a negotiable volume with matter of various kinds and various grades, some of it mere book noticing, seemingly not more worthy of collection and preservation than any other book noticing of the better sort. "Dante in the Bowery" is a taking title, which one finds to be a discussion of the advantages and drawbacks of admitting local and temporary allusions in a "serious" work of art. Certainly the practice tends to the diminution of priggism, even if John Milton would not have condescended to it, as William Shakespeare would and did. There is even a notice of the Cubist exhibition. Why this restriction, the reader is tempted to inquire, in a series of remarks "de omnibus rebus quibusdamque aliis"? Tell us about Mother Eddy! What do you think of Richard Strauss? It is all very well to laugh, but the most random and unconsidered trifles bound up here have their uses, have their one use as to the author, that of, in the good old Gibbonian phrase, "attesting the variety of his inclinations." Here is a man to whom nothing human is foreign. You will go far to find a book which on every page bears witness to so intense and various an interest in life; and what can be more admirable or enviable than that, what a better indication that life has been well spent? Admiration is increased with wonder that all these things should be "avocations," that all this interested and enjoyed and interesting and enjoyable writing has been done, so to say, "between rounds."

SWINBURNE STOPPED COUNTRY CHURCHGOERS

An amusing story of Swinburne is told by Edmund Gosse. At the age of 22 Swinburne was sent to study history under Bishop Stubbs, who was then in charge of a country parish in Essex. He arrived there on a Saturday and was excused attendance at Sunday morning church on the ground that he must be tired with his journey.

He had breakfast in bed, but finding it a glorious morning he arrayed himself in scarlet slippers and a light crimson dressing gown, sauntered into the garden and leaned pensively over the gate, with his red hair flaming brilliantly in the sunlight.

The church bells were ringing and the parishioners had all to pass the parsonage gate to get to church. But none of them dared to pass the flaming apparition, and all came to a halt. The church bells stopped, but at the instance of the vicar, who could not believe that all his parishioners had deserted him, were rung again.

At last the boldest man in the village bolted past the gate and the rest stampeded after him. Swinburne gazing at them in quiet wonder at their strange method of going to church.—*From the Pall Mall Gazette.*

THE PIONEER OF CHEAP LITERATURE

The introduction of the sloping Roman letters which are known to everybody as italics was made by Aldus Manutius of Venice in the latter part of the fifteenth century. He was the most famous printer of Italy and perhaps of the world.

The books he printed, known as Aldine editions, are much sought after by collectors. His first volume in the new type was a Virgil published in 1501 at the price of about two shillings of our money. Aldus, in fact, was the pioneer of cheap literature.

The Aldine mark is a dolphin twined about an anchor with the name "Aldvs" divided by the other part of the latter. If any reader finds a cartload of old books with this mark in his attic or lumber room he is duly advised not to use them for lighting the fire. "They would probably bring a good annuity for the solace of his declining years."—*J. Arthur Hill in Imprint.*